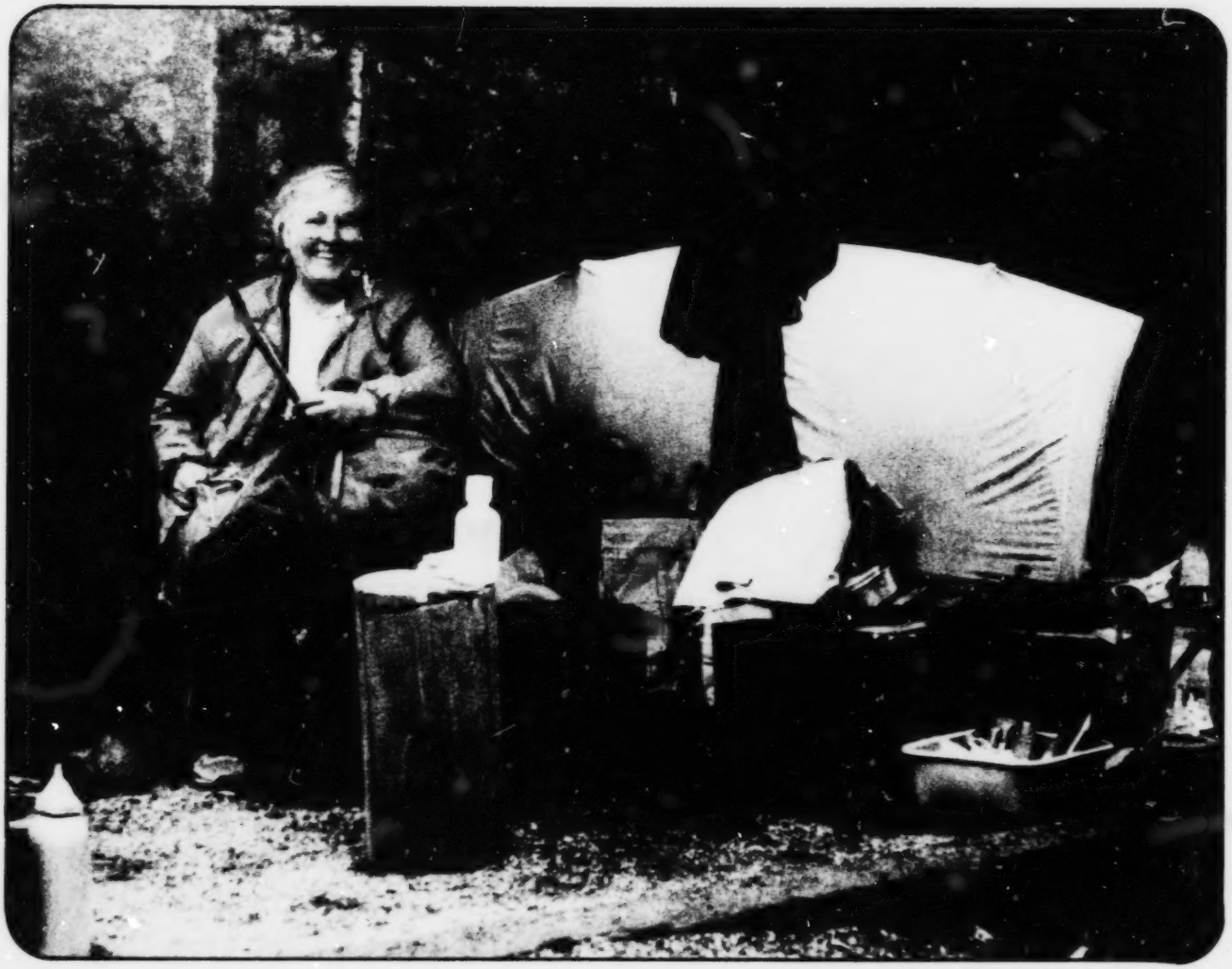
Terrain Development Division
Architectural and Engineering Services
Environment Canada
Western Region

Division, Aménagement du Paysage
Services d'architecture et de génie
Environnement Canada
Région de l'Ouest

WESTERN REGION CAMPGROUND REPORT

WATERTON LAKES NATIONAL PARK



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WESTERN REGION CAMPGROUND REPORT

WATERTON LAKES NATIONAL PARK

REGIONAL CAMPGROUND REPORT

EXECUTIVE SUMMARY

This report is a component of the regional campground study completed in 1989. It outlines the required recapitalization work and an implementation framework for the four campgrounds within Waterton Lakes National Park. The report has been prepared in a Project Brief format and can be adapted to either a Capital Project or Operational and Maintenance Task. The summary of costs are in 1989 dollars and are itemized as Architectural, Engineering and Landscape Work.

The study was intended to substantiate the costs of work required as a result of site investigations, interviews and various Management Planning and Visitor Services Studies. Architectural and Engineering Services have compiled a complete record in 1987, and 1988 of the individual campgrounds inventory and have completed a condition rating system. The inventory and condition report were utilized to prepare cost estimates for recapitalization in the four campgrounds in Waterton Lakes National Park to the total number of universal campsites to be recapitalized are 445 sites and are estimated to cost 2.4 million dollars.

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WESTERN REGION CAMPGROUND REPORT

WESTERN REGION CAMPGROUND REPORT

TOWNSITE CAMPGROUND Date: May 26, 1987

Waterton Lakes National Park

A. PROJECT PROPOSAL

Prepare a campground rehabilitation plan for the 241 site campground. The scope of work would include the site rehabilitation, building renovations and improvements, utility improvements, new trailer sanitary waste station, pedestrian circulation, vehicular improvements, new shower building and related work items.

B. PURPOSE

The improvements were documented from on-site inspections and meetings to review and identify the problems within the Townsite Campground. The Park Staff prepared a preliminary User Requirements Check List as well as separate report pages on the campground condition and potential solutions.

C. FUNCTION

1. Team Members

Team Captain: Patrick Glover, WRO, Architectural & Engineering Services

Park Staff: Lynn Yeates, Chief, Visitor Services
Ed Gamble, General Works Manager
Charlie Zinkan, Superintendent
Duane Barrus, Interpretation
Al Sturko, Resource Conservation

2. Major Work Items

1. Buildings:

- Kiosk - Upgrade
- Toilet Buildings
  - . Renovate
  - . Remove Unsuitable Units
  - . Upgrade Facilities
- Replacement Shower Building - New
- Shelters
  - . Upgrade
  - . Relocate/Demolish
- Utility Buildings - Relocate to Other Area

WESTERN REGION CAMPGROUND REPORT

2. Utilities:

- New Sanitary Waste Disposal Area
- Upgrade Water Distribution
- Grey Water Disposal
- Sewer Distribution
- Irrigation System
- Lighting Requirements/Equipment
- Fire Tower Alarm System Reassessment

3. Roads:

- Asphalt Roads - Upgrade and Chip Seal Surface
- Gravel Roads - New Chip Seal Surface Required
- Upgrade Signage
- Review Overall Circulation within Campground

4. Landscape:

- Universal Sites
  . 241 sites will require a universal campsite
  . defined activity pad
  . parking area
  . moveable tables
  . parking barrier rails
  . campsite markers - new method for site reservation system
  . common fire box design

- Serviced Sites
  . table
  . cement pad activity area
  . site markers
  . handicapped campsite area
  . screen planting required

- Walk-In
  . screen planting
  . Delineated campsite areas
  . upgrade existing toilet building and a requirement for a new shelter (part of building improvements)
  . group fire circle (screened from wind elements)

- General Note: Park Superintendent requests that a plan assessment be done to develop options for serviced and/or semi-serviced campsites to replace the walk-in campsites. This will be done by Terrain Development Section.

WESTERN REGION CAMPGROUND REPORT

4. Landscape (Cont'd):

- Wind Screening is lacking in the entire Townsite Campground as well as a Tree Planting Program. This will be reviewed as part of Regional Campground Study for Waterton.

- Recreation Area: ie. horse shoes, lawn darts, seating, small playground area.

- Group Fire Circle Area

- Linking Trails: Assess and develop asphalt walkways.

5. Interpretation:

- New information panels and kiosks within campground area.
- Notice Boards/Kiosks

6. Other:

- Emergency phone contact system required.
- Parking for visitors using new shower building.
- Review existing day use facilities opposite campground.
- Impact of campground on residential area.

D. SCHEDULE

1. **1987/88:** Investigation and Define Scope of Work for Regional Campground Study.

2. **Year One:** Approval and Preliminary Implementation/Assessment.

3. **Year Two:** Ongoing Recapitalization.

E. OPERATIONS AND MAINTENANCE

1. Design Capital Person Years are involved at WRO.

2. Natural gas lines should be reviewed for conversion of propane lines.

3. Conversion of time clocks within buildings to photo cell system.

4. Lighting requirements.

WESTERN REGION CAMPGROUND REPORT

F. GENERAL CAMPGROUND STATISTICS

1. Serviced (Level 2)

.1 Trailer camping with water and electrical hook-ups at each campsite. Centralized sanitary and sewage disposal facilities are provided.

.2 Density of Campground: 18 - 35 sites/hectare.

.3 People/Campsite: 1 - 4 people/campsite.

.4 Capacity: 15 - 250 campsites.

2. Semi-Serviced (Level 2)

.1 Tent and trailer camping with no utility hook-ups.

.2 Centralized sanitary, water and sewage disposal facilities are provided.

.3 Density of Campground: 8 - 18 sites/hectare.

.4 People/Campsite: 1 - 8 people/campsite.

.5 Capacity: 15 - 250 campsites.

3. Existing Conditions

.1 Serviced Campsites: 58 units.

.2 Semi-Serviced: 153 units.

.3 Walk-In: 30 units.

.4 Total number of campsites: 241 sites.

4. Statistics

Socio-Economic section of WRO have stated in the 1984 study of campgrounds that the site occupancy averages 67 nights for the 75 day evaluation period. This represents one of the highest in the region. The actual demand has an overall shortfall of approximately 22 sites.

WESTERN REGION CAMPGROUND REPORT

G. RESOURCE CONSERVATION

1. Resource Conservation Contact

Mr. Al Sturko, Chief, Park Warden.

2. General Analysis

The vegetation and soil cover on this fluvial fan-floodplain has been modified considerably due to facility development and Cameron Creek flooding. The wildlife are attracted to the area and have developed little or no fear of the visitor. This has become a problem to the resource managers. Assessments have to be made on the wildlife/visitor impact.

3. EARP

EARP Assessment Level One (Preliminary Screening) must be completed in 1988/89. Level two assessment must be completed prior to any detailed Area Development Plan.

H. INTERPRETATION

- The campground has an existing theatre close by which serves the campground and townsite persons. The trails linking to the facility require some improvement and location signage.

- The campground entry area requires an information and interpretive panel kiosk. This unit will provide base information on the campground and other Park activities available.

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WESTERN REGION CAMPGROUND REPORT

WL: TOWNSITE CAMPGROUND

DESCRIPTION OF WORK ITEM	PRIORITY	QUANTITY	UNIT COST	PHASING			TOTAL COST
				YR - 1	YR - 2	FUTURE	
A. ARCHITECTURE				9.9	386.3	148.7	544.9
B. LANDSCAPE				19.8	171.72	266.05	457.57
C. UTILITIES				30.3	NIL	83.4	113.7
D. GRAND TOTAL PROJECT COSTS				60.0	558.02	498.15	1,116.17

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WESTERN REGION CAMPGROUND REPORT

WL: TOWNSITE CAMPGROUND

DESCRIPTION OF WORK ITEM	PRIORITY	QUANTITY	UNIT COST	PHASING			TOTAL COST
				YR - 1	YR - 2	FUTURE	
A. ARCHITECTURAL							
1. Entrance Kiosk							
* (a) Minor Upgrade Improve.		Lump	Sum			12.0	
(b) New ?							
2. Maintenance Building Imps.		Lump	Sum			5.5	
3. Shelters							
(a) Removal		5	0.7			3.5	
(b) Upgrade		5	2.0			10.0	
4. New Shower/ Toilet Building (Subject to review)		Lump	Sum		220.0		
5. Walk-in Toilet Building Imps.		Lump	Sum			8.0	
6. New Shelters For Walk-In		Lump	Sum			30.0	
7. Toilet Bldg. Upgrade (Subject to Review)		5	15.0		50.0	25.0	
8. SUB-TOTAL					270.0	94.0	364.0
9. CONTINGENCY: 20%					54.0	18.8	72.8
10. RISK: 15%					40.5	14.1	54.6
11. ENGINEERING: MBC: 55. x 1.8 x 0.5 PY				9.9	19.8	19.8	49.5
12. ADMINISTRATION					2.0	2.0	4.0
13. TOTAL				9.9	386.3	149.7	544.9

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WESTERN REGION CAMPGROUND REPORT

WL: TOWNSITE CAMPGROUND

DESCRIPTION OF WORK ITEM	PRIORITY	QUANTITY	UNIT COST	PHASING			TOTAL COST
				YR - 1	YR - 2	FUTURE	
B. LANDSCAPE							
1. Stoves		NIL	0		NIL		
2. Tables		59	0.065		3.86		
3. Wheelstops		16	0.1		1.6		
4. Tent Pads:grass		NIL	10		NIL		
5. Site Markers		18	0.02		0.36		
6. Spurs		1740 squ. m	0.022		39.0		
7. Activity Pads		12	0.4		4.8		
8. Standpipes (Fix-Up)		2	0.05		0.1		
9. Electrical Pedestal		25	0.15			3.75	
10. Sever Service		NIL	0		NIL		
11. Wood Bins		4	1.25		5.0		
12. Garbage Containers		10	0.5		5.0		
13. New Standpipes		6	1.2		7.2		
14. Street Lights (repair)		4	1.0			4.0	
15. Roads							
(a) Cold Mix c/w chip Seal-repair		5800 squ. m	0.005			29.0	
16. Trails		100 squ. m	0.025			7.5	
17. Grey Water Disposal		12	0.10		1.2		
18. Irrigation System Imps.		Lump	Sum		5.0		
19. Landscape Planting Program		Lump	Sum		20.0	20.0	
(SUB-TOTAL)					**(93.12)**	**(64.25)**	

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WESTERN REGION CAMPGROUND REPORT

WL: TOWNSITE CAMPGROUND

DESCRIPTION OF WORK ITEM	PRIORITY	QUANTITY	UNIT COST	PHASING			TOTAL COST
				YR - 1	YR - 2	FUTURE	
B. LANDSCAPE (Continued)				NIL	93.1½	64.25	
20. Information Kiosks		2	4.0			8.0	
21. Entrance Area Sitework		Lump	Sum		8.0		
22. Conversion of Walk in Cmpgd. to 21 Serviced Trailer Sites							
(a) Site Convers.		21 sites	4.0			84.0	
(b) Sitework		21 sites	0.8			16.8	
(c) New Group Fire Circle		1	3.0			3.0	
(d) General Planting Program		Lump	Sum			5.0	
23. Shover Bldg. Sitework and Parking Area		Lump	Sum		10.0		
24. SUB-TOTAL:					111.12	181.05	292.17
25. CONTINGENCY: (20%)					22.2	36.2	58.4
26. RISK: 15%					16.6	27.0	43.6
27. ENGINEERING: MBC: 55.0 x 1.8 x 0.6 PY				19.8 (0.2)	19.8 (0.2)	19.8 (0.2)	59.4
28. ADMINISTRATION					2.0	2.0	4.0
29. TOTAL				19.8	171.72	266.05	457.57

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WESTERN REGION CAMPGROUND REPORT

VL: TOWNSITE CAMPGROUND

DESCRIPTION OF WORK ITEM	PRIORITY	QUANTITY	UNIT COST	PHASING			TOTAL COST
				YR - 1	YR - 2	FUTURE	
C. UTILITIES							
1. New Dumping Station		4 lanes	11.25			45.0	
2. Area Lighting Upgrading Imps.		Lump	Sum			6.0	
3. Fire Tower Alarm Imps.		Lump	Sum			3.5	
4. Assessment of Oveerall Water Sewer and Electr. Services/Supply		Lump	Sum	10.0			
5. SUB-TOTAL				10.0	NIL	54.5	64.5
6. CONTINGENCY: 10%						5.4	5.4
7. RISK: 5%						2.7	2.7
8. ENGINEERING: MBC: 55. x 1.8 x 0.2 PY				19.8		19.8	39.6
9. ADMINISTRATION				0.5		1.0	1.5
10. TOTAL				30.3	NIL	83.4	113.7

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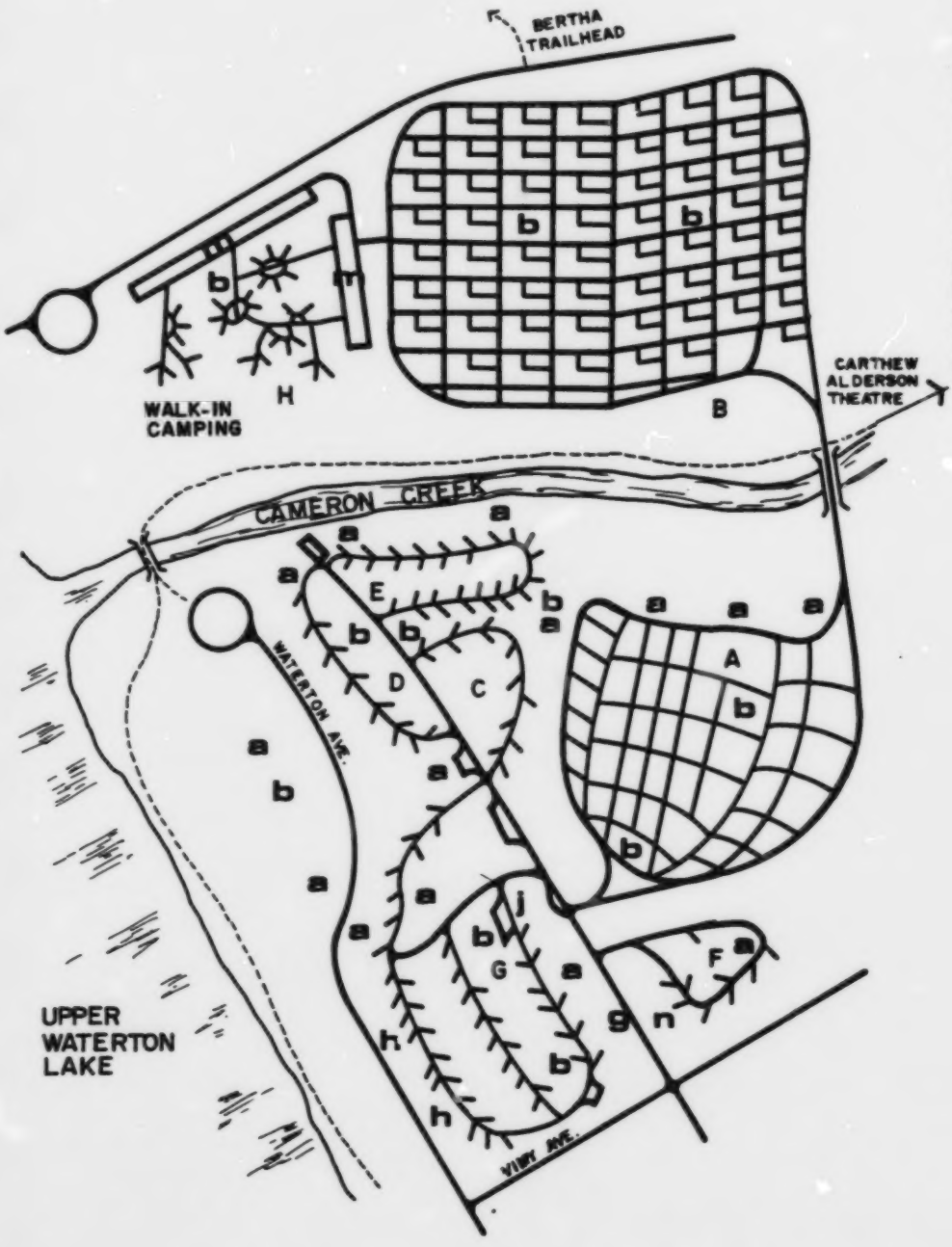

LEGEND

- Kitchen Shelter - a
- Washrooms - b
- Well / Water Standpipe - c
- Wood Bin - d
- Garbage - e
- Outdoor Theatre - f
- Kiosk - g
- Residences - h
- Play Area - i
- Trailer Dump Station - j
- Trail - k
- Fire Circle / Pit - l
- Parking - m
- Telephones - n
- Showers - o
- Picnic Area - p
- Food Storage - q
- Signs - r
- Viewpoint - s
- Handicap Washroom - t

Townsite Campground – WATERTON LAKES

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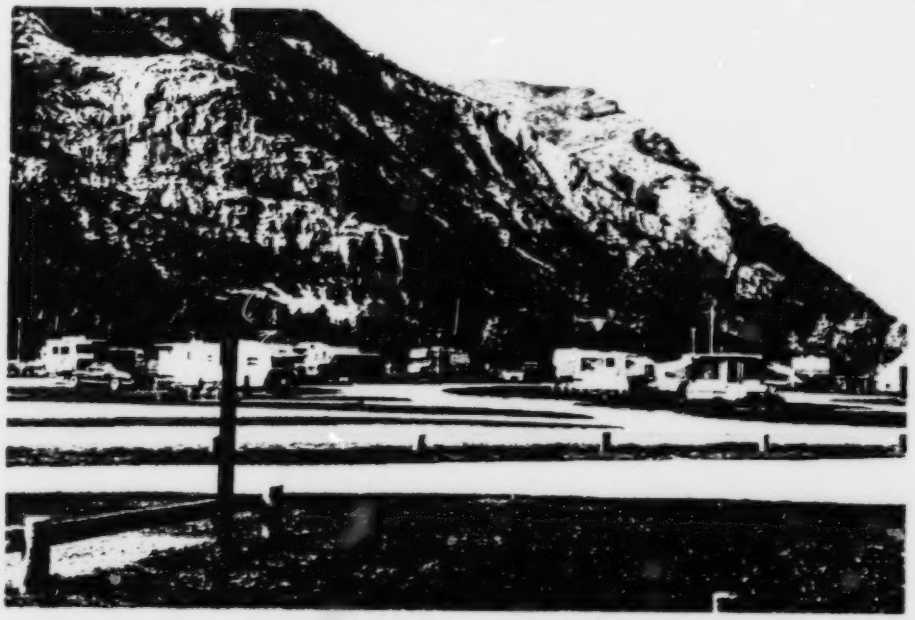
TOWNSITE CAMPGROUND WLNP



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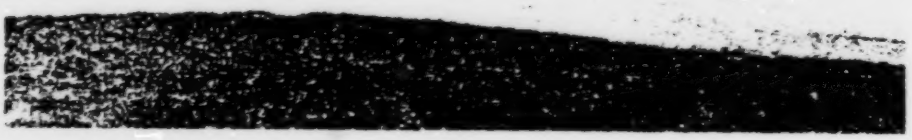
WESTERN REGION CAMPGROUND REPORT

TOWNSITE CAMPGROUND WLNP



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WESTERN REGION CAMPGROUND REPORT

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WESTERN REGION CAMPGROUND REPORT

CRANDELL MOUNTAIN CAMPGROUND Date: August 20, 1987

Waterton Lakes National Park

A. PROJECT PROPOSAL

Prepare a campground rehabilitation plan for the 130 site campground. The scope of work would include the site rehabilitation, building renovations and improvements, utility improvements, pedestrian and vehicular circulation improvements, and related work items.

B. PURPOSE

The improvements were documented from on-site inspections and meetings to review and identify the problems within the Crandell Mountain Campground. The Park Staff prepared a preliminary User Requirements Check List as well as separate report pages on the campground condition and potential solutions.

C. FUNCTION

1. Team Members

Team Captain: Patrick Glover, WRO, Architectural & Engineering Services

Park Staff: Lynn Yeates, Chief, Visitor Services
Ed Gamble, General Works Manager
Charlie Zinkan, Superintendent
Duane Barrus, Interpretation
Al Sturko, Resource Conservation

2. Major Work Items

1. Buildings:

- Kiosk - New Unit Required
- Toilet Building - Upgrade Facilities
- Shelters
  . modify to improve wind screening
  . upgrade
- Staff Quarters - Upgrade/Improve Generator
- Theatre - Minor Improvements

WESTERN REGION CAMPGROUND REPORT

2. Utilities:

- Upgrade Water Supply and Distribution
- Analyze and Assess Sewage Disposal System
- Grey Water Disposal
- Lighting Requirements
- Investigate propane requirements for heating water for Toilet Buildings.
- Investigate possibility of dump station requirements at Crandell versus townsite campground.

3. Roads:

- Asphalt Surface - Upgrade and Chip Seal Surface Required
- Gravel Roads - New Chip Seal Surface Required
- Upgrade Signage
- Review Circulation
- New Parking Area for Theatre Visitors.
- Investigate Overall Kiosk Location and Potential/Need for Parking.

4. Landscape:

- Universal Sites
  . 130 sites existing require a universal site
  . parking spur
  . new fire box design
  . portable table
  . vehicle barriers required
  . new campsite markers c/with a system for site reservation
  . tenting surface
- Linking Trail System to Theatre and within Campground.
- New Playground Structure
- Planting Program for Screening
- Deadfall Removal Assessment/Study
- Fire Wood Area - review site and location.
- Tenting Surface

5. Interpretation:

- The theatre provides programs for the visitors and a new parking area is required (part of roadwork).
- New information kiosk required.

WESTERN REGION CAMPGROUND REPORT

D. SCHEDULE

1. 1987/88: Investigation and Define Scope of Work for Regional Campground Study.
2. Year One: Approval and Preliminary Implementation/Assessment.
3. Year Two: Ongoing Recapitalization.

E. OPERATIONS AND MAINTENANCE

1. Design Capital Person Years are involved at WRO.
2. Investigate an option plan for use of generators for electricity at staff quarters.
3. Investigate option for fuel use to operate lighting at toilet facilities.

F. GENERAL CAMPGROUND STATISTICS

1. Design Criteria (From Parks Campground Manual)

    1. Semi-Serviced (Level 2):

        - Tent and trailer camping with no utility hook-ups.
        - Centralized sanitary, water and sewage disposal facilities are provided. (Note: No sewage disposal facilities are existing.)

    2. Density of Campground: 8 - 18 sites/hectare.
    3. People/Campsite: 1 - 8 people/campsite.
    4. Capacity: 15 - 250 campsites.

2. Existing Conditions

    1. 130 semi-serviced campsites.
    2. Socio-Economic section of WRO have stated in the 1984 study of campgrounds that there is a high occupancy record (66 nights) and a chronic shortage of sites. They have said that an additional 25 sites are required to alleviate the shortage. In discussions with Park managers this shortage was not a problem. This should be re-evaluated with present day statistics.

WESTERN REGION CAMPGROUND REPORT

G. RESOURCE CONSERVATION

1. Resource Conservation Contact

Mr. Al Sturko, Chief, Park Warden.

2. General Analysis

The vegetation on this fluvial fan-floodplain has been modified considerably due to facility development and campground use. There is a wide habitat diversity in the area which makes it important to wildlife, particularly ungulates (elk and Deer) and carnivores. Impacts, however, are minimized by summer only operation. Assessments have to be done.

3. EARP

EARP Assessment Level One (Preliminary Screening) must be completed in 1988/89. Level two assessment must be completed prior to any detailed Area Development Plan.

H. INTERPRETATION

1. The campground theatre provides programs to the visitors. The need for a parking area and a linking trail to the campsites is required.

2. An information panel Kiosk is definitely required for information and to provide an opportunity for non-personalized services. This should be at the entrance to the campground and should be reinforced by other panels within areas of the campground.

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WESTERN REGION CAMPGROUND REPORT

CRANDELL MOUNTAIN CAMPGROUND

DESCRIPTION OF WORK ITEM	PRIORITY	QUANTITY	UNIT COST	PHASING			TOTAL COST
				YR - 1	YR - 2	FUTURE	
A. ARCHITECTURE				19.8	72.7	101.1	193.6
B. LANDSCAPE				19.8	229.29	150.65	399.74
C. UTILITIES				10.95	146.9	34.87	192.72
D. GRAND TOTAL				50.55	448.89	286.62	786.06
PROJECT COSTS							

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WESTERN REGION CAMPGROUND REPORT

CRANDELL MOUNTAIN CAMPGROUND

	DESCRIPTION OF WORK ITEM	PRIORITY	QUANTITY	UNIT COST	PHASING			TOTAL COST
					YR - 1	YR - 2	FUTURE	
	A. ARCHITECTURAL							
*	1. Entrance Kiosk							
	(a) Maintain and Upgrade		1	10.0			10.0	
	(b) New Kiosk Structure		1	45.0			45.0	
	(c) Convert to Self-Registr.		1	4.0			4.0	
	2. Toilet Building Improvements		4	7.0		28.0		
	3. Kitchen Shelters		4	3.2		12.8		
	4. Theatre		1	3.5			3.5	
	5. Staff Quarters		1	1.0			1.0	
	6. SUB-TOTAL					**40.8**	**63.5**	**104.3**
	7. CONTINGENCY 15%					**6.1**	**9.5**	**15.6**
	8. RISK: 10%					**4.0**	**6.3**	**10.3**
	9. ENGINEERING MBC: 55.0 x 1.8 x 0.6 PY				**19.8**	**19.8**	**19.8**	**59.4**
	10. ADMINISTRATION					**2.0**	**2.0**	**4.0**
	11. TOTAL COST				**19.8**	**72.7**	**101.1**	**193.6**
*	**12. NEW SHOWER BUILDING**			**50.0+/-**				

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WESTERN REGION CAMPGROUND REPORT

CRANDELL MOUNTAIN CAMPGROUND

DESCRIPTION OF WORK ITEM	PRIORITY	QUANTITY	UNIT COST	PHASING			TOTAL COST
				YR - 1	YR - 2	FUTURE	
B. LANDSCAPE							
1. Stoves		132	0.120		15.84		
2. Tables		17	0.2		3.4		
3. Wheelstops		NIL	NIL		NIL		
4. Tent Pads		130	0.158		20.5		
5. Site Markers		21	0.028		0.6		
6. Spurs		60	0.666		40.0		
7. Sites		132	0.25		33.0		
8. Site Services		NIL	NIL		NIL		
* 9. Wood Bins		1 (4)	3.5 (2.0)		3.5 (8.0)		
10. Garbage Container		3	0.1		0.3		
11. Street Lights		NIL	NIL		NIL		
12. Roadways							
(a) Chip Seal/ Repair		2600 squ. m	0.012			31.2	
(b) Gravel		1950 squ. m	0.0185		36.2		
13. Trails		100 squ. m	0.025		2.5		
14. Fire Suppresion Boxes		3	0.1		0.3		
15. Short Cut Trails and Roadway Rehab.		Lump	Sum			7.0	
16. Rehabilitation of Roadways		Lump	Sum			5.0	
17. Define Trail System (Nev)		Lump	Sum			15.0	
18. Campsite Barriers		780	0.025				
19. Overall Planting Program		Lump	Sum			15.0	
SUB - TOTAL					156.14 (8.0)	73.2	

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WESTERN REGION CAMPGROUND REPORT

CRANDELL MOUNTAIN CAMPGROUND

DESCRIPTION OF WORK ITEM	PRIORITY	QUANTITY	UNIT COST	PHASING			TOTAL COST
				YR - 1	YR - 2	FUTURE	
B. LANDSCAPE					(8.0) 156.14	73.2	
(Continued)							
20. Deadfill Removal		Lump	Sum			6.0	
21. Theatre Parking Average		20 cars	1.0			20.0	
22. Campsite Marker		130	0.010		1.3		
23. SUB-TOTAL					157.44 (8.0)	99.2	256.64 (8.0)
24. CONTINGENCY: (20%)					31.4	19.8	51.2
25. RISK: (15%)					23.6	14.8	38.4
26. ENGINEERING: MBC: 55.0 x 1.8 x 0.5 PY				19.8	14.85	14.85	49.5
27. ADMINISTRATION					2.0	2.0	4.0
28. TOTAL				19.8	229.29	150.65	399.74

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WESTERN REGION CAMPGROUND REPORT

CRANELL MOUNTAIN CAMPGROUND

DESCRIPTION OF WORK ITEM	PRIORITY	QUANTITY	UNIT COST	PHASING			TOTAL COST
				YR - 1	YR - 2	FUTURE	
C. UTILITIES							
* 1. Dumping Station		1	7.0		7.0		
2. Water Supply System				6.0	80.0	20.0	
3. Sewer Improvements		4	2.5		10.0		
4. Propane Improvements		Lump	Sum		0.8		
5. SUB-TOTAL				6.0	97.8	20.0	123.8
6. CONTINGENCY (20%)					19.56	1.0	20.55
7. RISK: (15%)					14.67	0.5	15.17
8. ENGINEERING:				4.95	12.37	12.37	29.7
9. ADMINISTRATION					2.5	1.0	3.5
10. TOTALS				10.95	146.9	34.87	192.72

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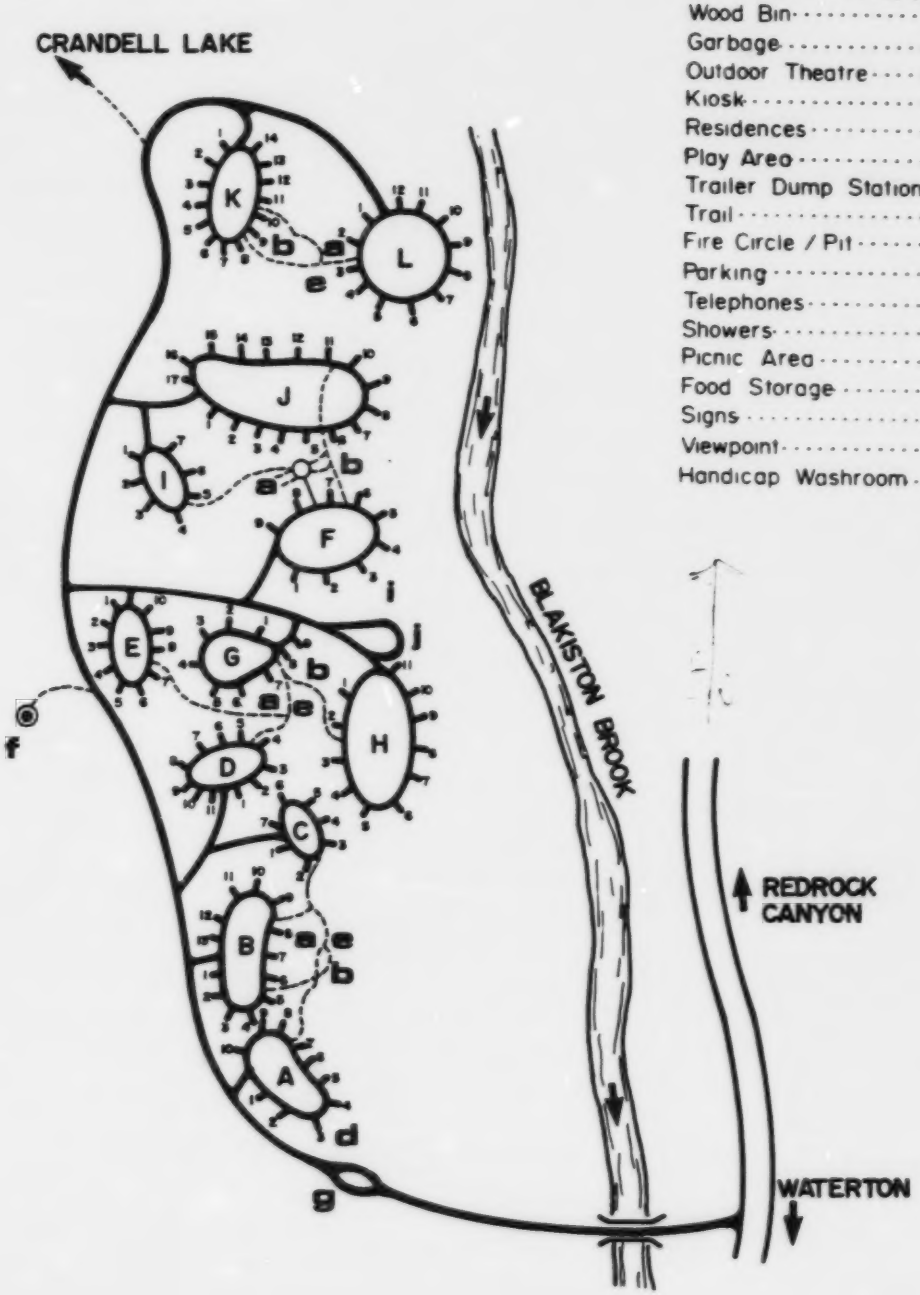
WESTERN REGION CAMPGROUND REPORT

LEGEND

- Kitchen Shelter - a
- Washrooms - b
- Well / Water Standpipe - c
- Wood Bin - d
- Garbage - e
- Outdoor Theatre - f
- Kiosk - g
- Residences - h
- Play Area - i
- Trailer Dump Station - j
- Trail - k
- Fire Circle / Pit - l
- Parking - m
- Telephones - n
- Showers - o
- Picnic Area - p
- Food Storage - q
- Signs - r
- Viewpoint - s
- Handicap Washroom - t



Crandell Mountain Campground - WATERTON LAKES

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WESTERN REGION CAMPGROUND REPORT

CRANDELL MOUNTAIN CAMPGROUND WLNP

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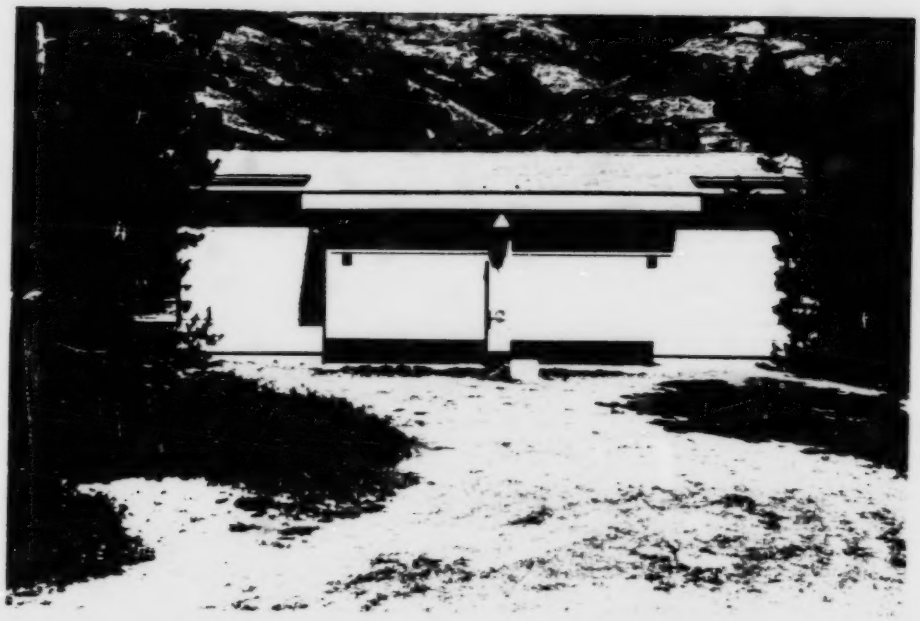
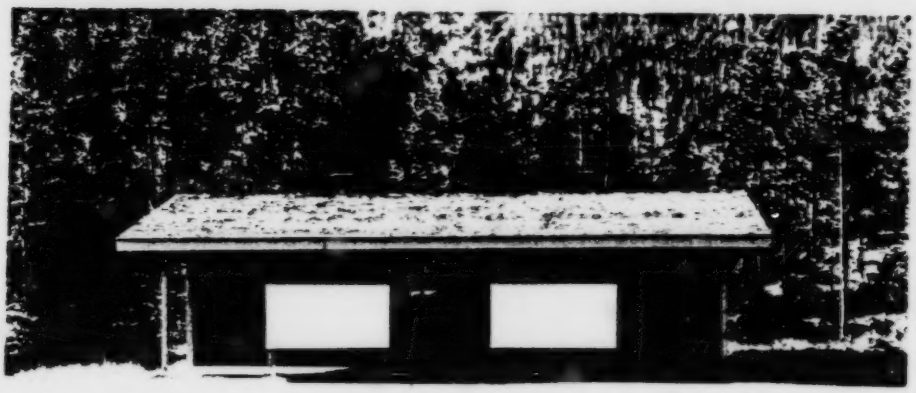
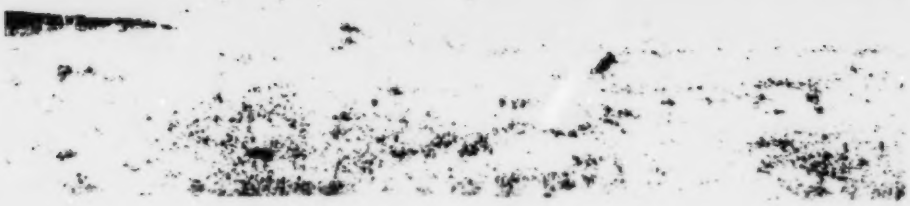
WESTERN REGION CAMPGROUND REPORT

CRANDELL MOUNTAIN CAMPGROUND WLNP







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WESTERN REGION CAMPGROUND REPORT

WESTERN REGION CAMPGROUND REPORT

BELLY RIVER CAMPGROUND Date: August 20, 1987

Waterton Lakes National Park

A. PROJECT PROPOSAL

Prepare a campground rehabilitation plan for the 24 site campground. The scope of work would include the site rehabilitation, building improvements, utility improvements and related work items.

B. PURPOSE

The improvements were documented from on-site inspections and meetings to review and identify the problems within the Belly River Campground. The Park Staff prepared a preliminary User Requirements Check List as well as separate report pages on the campground condition and potential solutions.

C. FUNCTION

1. Team Members

Team Captain: Patrick Glover, WRO, Architectural & Engineering Services

Park Staff: Lynn Yeates, Chief, Visitor Services
Ed Gamble, General Works Manager
Charlie Zinkan, Superintendent
Duane Barrus, Interpretation
Al Sturko, Resource Conservation

2. Major Work Items

1. Buildings:

- Toilet Building - Remove existing and construct new vault toilet units.
- Shelters - Upgrade structure and stoves.
- Remove garbage building.

2. Utilities:

- Investigate existing water supply system and convert to spring.
- Grey water disposal units.

WESTERN REGION CAMPGROUND REPORT

3. Roads:

- Upgrade gravel surface and if financially feasible chip seal surface.
- Upgrade Signage

4. Landscape:

- Universal Sites
  . 24 existing sites, design will identify number to be constructed
  . parking spur
  . new fire box design
  . potable table
  . vehicle barriers required
  . new campsite markers c/with a system for site reservation
  . tenting surface
- Improved Playground Facility
- Site Area Clean-Up - weeds/deadfall/etc.
- Fire Wood Enclosure - control

5. Interpretation:

- The existing fire circle needs to be improved and more defined.
- New information kiosk required.

D. SCHEDULE

1. 1987/88: Investigations and Define Scope of Work for Regional Campground Study.

2. Year One: Approval and Preliminary Implementation/Assessment.

3. Year Two: Ongoing Recapitalization.

E. OPERATIONS AND MAINTENANCE

1. Design Capital Person Years are involved at WRO.

WESTERN REGION CAMPGROUND REPORT

F. GENERAL CAMPGROUND STATISTICS

1. Design Criteria (From Environment Canada Parks Manual)

1. Semi-Serviced (Level 2):

   - Tent and trailer camping with no utility hook-ups.
   - Centralized sanitary, water and sewage disposal facilities are provided. (Note: No sewage disposal facilities are existing.)

2. Density of Campground: 8 - 18 sites/hectare.

3. People/Campsite: 1 - 8 people/campsite.

4. Capacity: 15 - 250 campsites.

2. Existing Conditions

1. 24 existing sites.

2. Socio-Economic section of WRO have said that there is a small surplus of 3 sites in a declining trend averaging 6% per year. No changes are indicated for this campground regarding the number of sites.

G. RESOURCE CONSERVATION

1. Resource Conservation Contact

Mr. Al Stuko, Chief, Park Warden.

2. General Analysis

The vegetation on this fluvial fan-floodplain has been modified considerably due to facility development and campground use. There is a wide habitat diversity in the area which makes it important to wildlife, particularly ungulates (elk and deer) and carnivores. Impacts, however, are minimized by summer only operation. Assessments have to be done.

3. EARP

EARP Assessment Level One (Preliminary Screening) must be completed in 1988/89. Level two assessment must be completed prior to any detailed Area Development Plan.

WESTERN REGION CAMPGROUND REPORT

H. INTERPRETATION

1. The campground theatre provides programs to the visitors. The need for a parking area and a linking trail to the campsites is required.

2. An information panel Kiosk is definitely required for information and to provide an opportunity for non-personalized services. This should be at the entrance to the campground and should be reinforced by other panels within areas of the campground.

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WESTERN REGION CAMPGROUND REPORT

BELLY RIVER CAMPGROUND

DESCRIPTION OF WORK ITEM	PRIORITY	QUANTITY	UNIT COST	PHASING			TOTAL COST
				YR - 1	YR - 2	FUTURE	
A. ARCHITECTURE				19.8	90.99		110.79
B. LANDSCAPE				9.9	123.02		132.92
C. UTILITIES				NIL	22.15		22.15
D. GRAND TOTAL PROJECT COSTS				29.7	236.16	NIL	265.86

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WESTERN REGION CAMPGROUND REPORT

BELLY RIVER CAMPGROUND

DESCRIPTION OF WORK ITEM	PRIORITY	QUANTITY	UNIT COST	PHASING			TOTAL COST
				YR - 1	YR - 2	FUTURE	
A. ARCHITECTURE							
1. Remove Pit Privvies		5	0.05		0.25		
2. New Vault Type Toilet Buildings		2	25.0		50.0		
3. Shelter Imps.		1	7.0		7.0		
4. Building for Garbage		1	0.6		0.6		
5. SUB-TOTAL					57.85		
6. CONTINGENCY (20%)					11.57		
7. RISK: (15%)					8.67		
8. ENGINEERING MBC: 55.0 x 1.8 x 0.3				19.8	9.9		
9. ADMINISTRATION					3.0		
10. TOTAL				19.8	90.99	NIL	110.79

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Environnement Canada Région de l'Ouest

WESTERN REGION CAMPGROUND REPORT

BELLY RIVER CAMPGROUND

DESCRIPTION OF WORK ITEM	PRIORITY	QUANTITY	UNIT COST	PHASING			TOTAL COST
				YR - 1	YR - 2	FUTURE	
B. LANDSCAPE							
1. Stoves		24	0.120		2.88		
2. Tables		24	0.662		1.59		
3. Wheelstops		36	0.784		2.825		
4. Tent Pads		24	0.700		16.8		
5. Site Markers		24	0.025		0.6		
6. Spurs		24	0.480		11.52		
7. Site Services		NIL	NIL		NIL		
8. Wood Bins		2	1.5		3.0		
9. Garbage Containers		4	0.1		0.4		
10. Site Area Clean-up		Lump	Sum		8.0		
11. Gravel Paths		Lump	Sum		7.0		
12. Play ground Improvements		Lump	Sum		3.0		
13. Self-Registration Kiosk Structure		1	4.0		4.0		
14. Outdoor Theatre Improvements		Lump	Sum		4.0		
15. Roads		750 squ. m	0.012		9.0		
16. SUB-TOTAL					**74.61**		
17. CONTINGENCY: (20%)					**14.92**		
18. RISK: (15%)					**11.19**		
19. ENGINEERING MBC: 55.0 x 1.8 x 0.3				**9.9**	**19.8**		
20. ADMINISTRATION					**2.5**		
21. TOTAL				**9.9**	**123.02**	**NIL**	**132.92**

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WESTERN REGION CAMPGROUND REPORT

BELLY RIVER CAMPGROUND

DESCRIPTION OF WORK ITEM	PRIORITY	QUANTITY	UNIT COST	PHASING			TOTAL COST
				YR - 1	YR - 2	FUTURE	
C. UTILITIES							
1. Water Wells		2	6.0		12.0		
2. Dumping Station		NIL	NIL		NIL		
3. Grey Water Disposal		4	0.6		2.4		
4. SUB-TOTAL					14.4		
5. CONTINGENCY					2.5		
6. RISK					1.0		
7. ENGINEERING MBC: 55.0 x 1.8 x 0.05					2.75		
8. ADMINISTRATION					1.5		
9. TOTAL					22.15		

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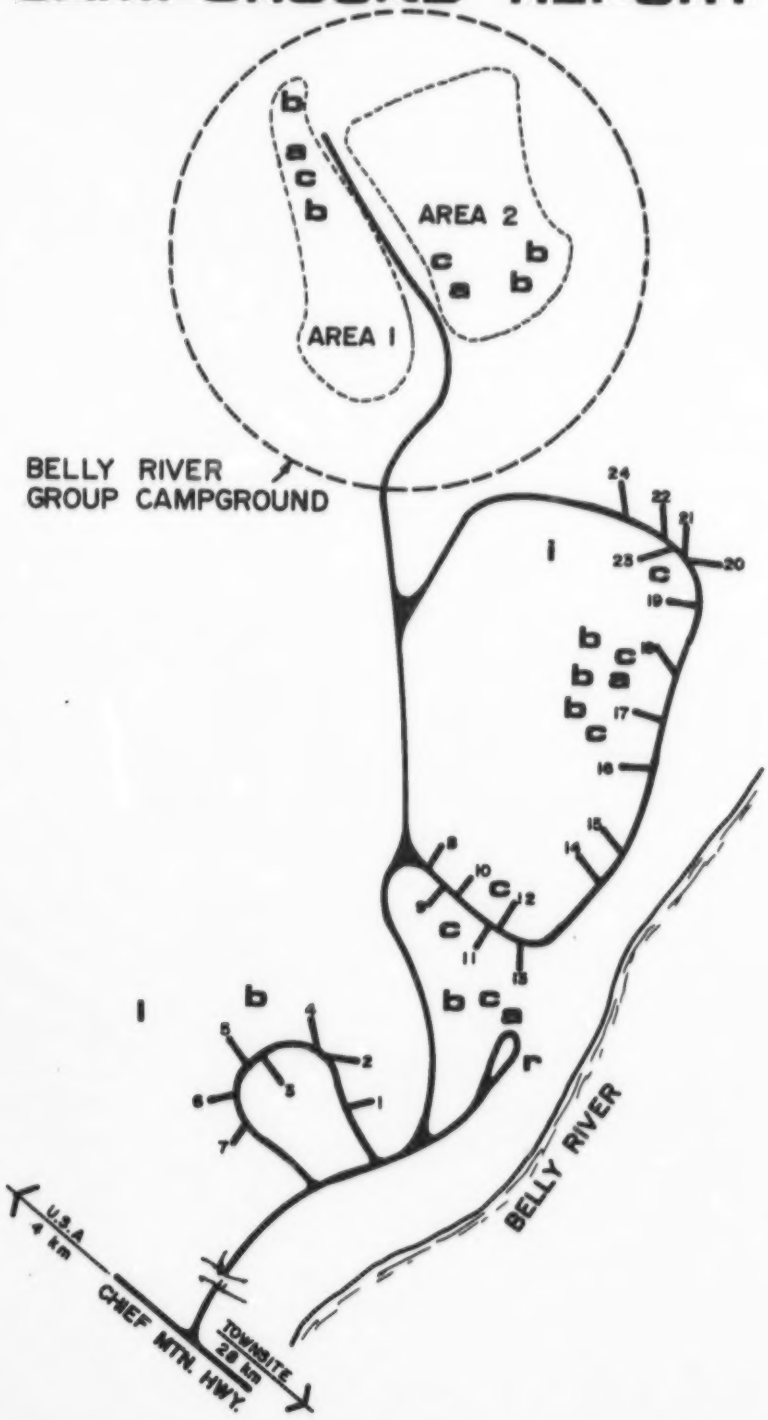
WESTERN REGION CAMPGROUND REPORT



LEGEND

- Kitchen Shelter - a
- Washrooms - b
- Well / Water Standpipe - c
- Wood Bin - d
- Garbage - e
- Outdoor Theatre - f
- Kiosk - g
- Residences - h
- Play Area - i
- Trailer Dump Station - j
- Trail - k
- Fire Circle / Pit - l
- Parking - m
- Telephones - n
- Showers - o
- Picnic Area - p
- Food Storage - q
- Signs - r
- Viewpoint - s
- Handicap Washroom - t

Belly River Campground – WATERTON LAKES

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WESTERN REGION CAMPGROUND REPORT

BELLY RIVER CAMPGROUND WLNP

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WESTERN REGION CAMPGROUND REPORT

WESTERN REGION CAMPGROUND REPORT

BELLY RIVER GROUP CAMPGROUND Date: August 20, 1987

Waterton Lakes National Park

A. PROJECT PROPOSAL

Prepare a campground redevelopment plan for the existing 200 person campground. The scope of work would include the site rehabilitation, building improvements, water system improvements and, related work items.

B. PURPOSE

The improvements were documented from on-site inspections and meetings to review and identify the problems within the Belly River Group Campground. The Park Staff prepared a preliminary User Requirements Check List as well as separate report pages on the campground condition and potential solutions.

C. FUNCTION

1. Team Members

Team Captain: Patrick Glover, WRO, Architectural & Engineering Services

Park Staff: Lynn Yeates, Chief, Visitor Services
Ed Gamble, General Works Manager
Charlie Zinkan, Superintendent
Duane Barrus, Interpretation
Al Sturko, Resource Conservation

2. Major Work Items

1. Buildings:

- Toilet Buildings - Remove existing pit privies and install vault type toilet units at a more central location.
- A food storage building is required.
- Shelters - Minor improvements to interior of building (cupboards, maintenance).

2. Utilities:

- Investigate existing water supply system and convert to spring.
- Grey water disposal units.

WESTERN REGION CAMPGROUND REPORT

3. Roads:

- Upgrade gravel surface and if financially feasible chip seal surface.
- Upgrade Signage
- Construct proper parking areas at the shelter locations.
- Construct an area for trailer units to operate on a hard surfaced camping area.

4. Landscape:

- The area is very open and has a good grass cover. The area requires some screening and site definition. Tree planting and berms will be installed.
- The group eating areas require better delineation and wind screening.
- Install a central fire circle for each group.
- Garbage bin location
- Flagpoles required
- Investigate the requirement for a trail from the area. The area has a high degree of bear conflicts.
- New firewood enclosures.
- Investigate various wind screening devices and design solutions.

5. Interpretation:

- There is an existing theatre at the adjacent Belly River Campground and this can be used by the users of the group campground.
- There is a need for an information board with interpretive panels within the campground.

D. SCHEDULE

1. **1987/88:** Investigations and Define Scope of Work for Regional Campground Study.

2. **Year One:** Approval and Preliminary Implementation/Assessment.

3. **Year Two:** Ongoing Recapitalization.

E. OPERATIONS AND MAINTENANCE

1. Design Capital Person Years are involved at WRO.

WESTERN REGION CAMPGROUND REPORT

F. GENERAL CAMPGROUND STATISTICS

1. Design Criteria (From Environment Canada Parks Manual)

1. Group (Level 2): Group tent camping with centralized parking, potable water and pit/vault toilets.
2. Density of Campground: 1 - 5 sites/hectare.
3. People/Campsite: 30 -40 people/campsite.
4. Capacity: 1 - 5 campsites.

2. Existing Conditions

1. Two areas separated by a central road.
2. Number of people per campsite is limited to a maximum of 100, although this is rarely realized.
3. The Park have prepared use levels since 1982 and no changes are anticipated in numbers.

G. RESOURCE CONSERVATION

1. Resource Conservation Contact

Mr. Al Sturko, Chief, Park Warden.

2. General Analysis

The vegetation on this fluvial fan-floodplain has been modified considerably due to facility development and campground use. There is a wide habitat diversity in the area which makes it important to wildlife, particularly ungulates (elk and deer) and carnivores. Impacts, however are minimized by summer only operation. Assessments have to be done.

3. EARP

EARP Assessment Level One (Preliminary Screening) must be completed in 1988/89. Level two assessment must be completed prior to any detailed Area Development Plan.

WESTERN REGION CAMPGROUND REPORT

H. INTERPRETATION

1. The existing fire circle at Belly River Campground has to be improved and the group campers can utilize this facility.

2. An information board with interpretive messages is required for regulatory and informative media.

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WESTERN REGION CAMPGROUND REPORT

BELLY RIVER GROUP CAMPGROUND

DESCRIPTION OF WORK ITEM	PRIORITY	QUANTITY	UNIT COST	PHASING			TOTAL COST
				YR - 1	YR - 2	FUTURE	
A. ARCHITECTURE					76.3		
B. LANDSCAPE					104.4		
C. UTILITIES					20.95		
D. GRAND TOTAL PROJECT COSTS					201.65		

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WESTERN REGION CAMPGROUND REPORT

BELLY RIVER GROUP CAMPGROUND

DESCRIPTION OF WORK ITEM	PRIORITY	QUANTITY	UNIT COST	PHASING			TOTAL COST
				YR - 1	YR - 2	FUTURE	
A. ARCHITECTURE							
1. Toilets		2	25.0		50.0		
2. Shelter		2	3.0		6.0		
3. SUB-TOTAL					56.0		
4. CONTINGENCY 10%					5.6		
5. RISK: 5%					2.8		
6. ENGINEERING MBC: 55.0 x 1.8 x 0.1					9.9		
7. ADMINISTRATION					2.0		
8. TOTAL					76.3		

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WESTERN REGION CAMPGROUND REPORT

BELLY RIVER GROUP CAMPGROUND

DESCRIPTION OF WORK ITEM	PRIORITY	QUANTITY	UNIT COST	PHASING			TOTAL COST
				YR - 1	YR - 2	FUTURE	
B. LANDSCAPE							
1. Fire Circle		2	3.5		7.0		
2. Tables		10	0.2		2.0		
3. Site Improvements		Lump	Sum		5.0		
4. Planting Program		Lump	Sum		15.0		
5. Wood Bin		2	1.0		2.0		
6. Garbage Containers		2	0.400		0.8		
7. Flagpoles		2	1.8		3.6		
8. Parking Area		800 squ. m	0.029		23.5		
9. Road Improvement		200 squ. m	0.025		5.0		
10. Information Kiosk		2	1.5		3.0		
11. Grey Water Disposal		2	0.8		1.6		
12. SUB-TOTAL					68.5		
13. CONTINGENCY 10%					6.8		
14. RISK: 10%					6.8		
15. ENGINEERING: MBC: 55 x 1.8 x 0.2					19.8		
16. ADMINISTRATION					2.5		
17. TOTAL					104.4		

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WESTERN REGION CAMPGROUND REPORT

BELLY RIVER GROUP CAMPGROUND

DESCRIPTION OF WORK ITEM	PRIORITY	QUANTITY	UNIT COST	PHASING			TOTAL COST
				YR - 1	YR - 2	FUTURE	
C. UTILITIES							
1. Water Supply System (Wells)		2	6.0		12.0		
2. SUB-TOTAL					12.0		
3. CONTINGENCY					2.0		
4. RISK					1.0		
5. ENGINEERING MBC: 55.0 x 1.8 x 0.05					4.95		
6. ADMINISTRATION					1.0		
7. TOTAL					20.95		

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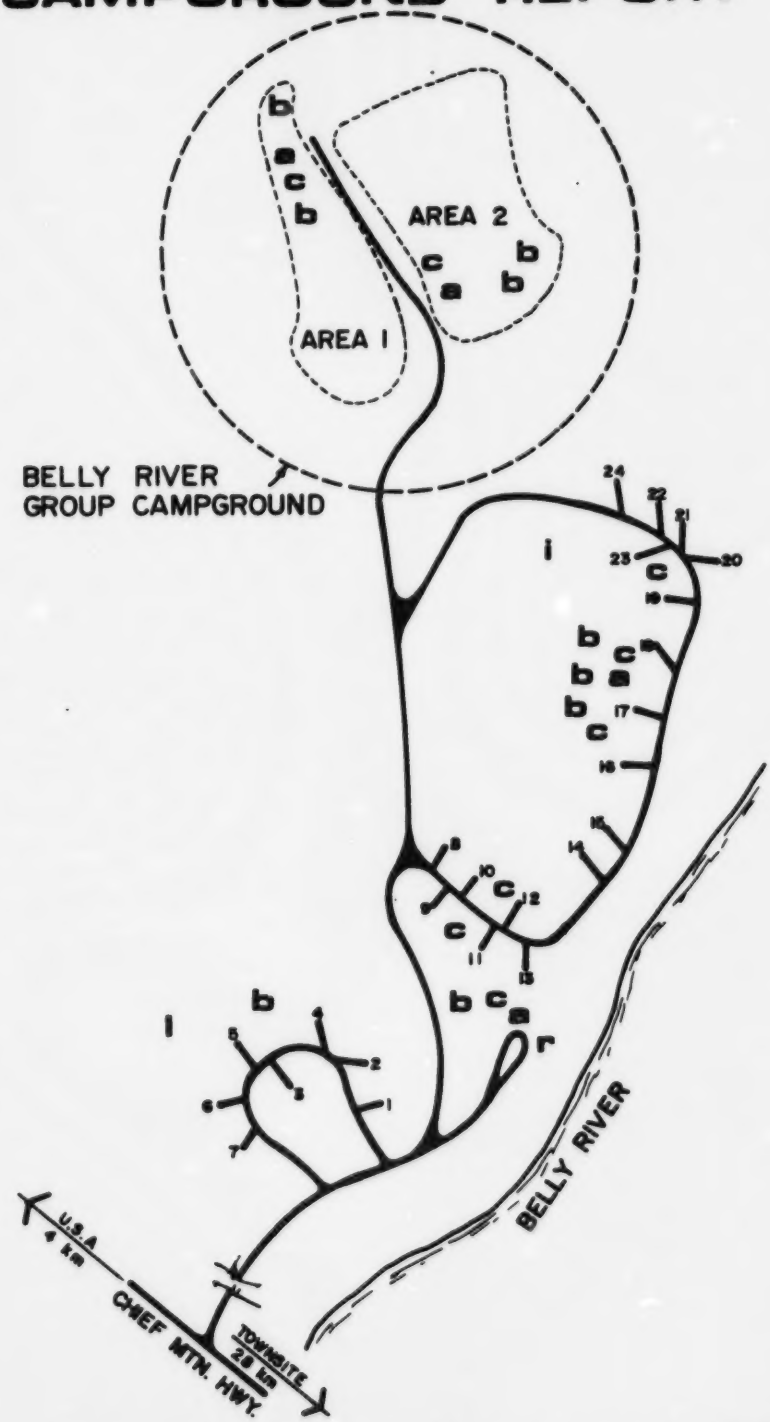
WESTERN REGION CAMPGROUND REPORT



LEGEND

- Kitchen Shelter - a
- Washrooms - b
- Well / Water Standpipe - c
- Wood Bin - d
- Garbage - e
- Outdoor Theatre - f
- Kiosk - g
- Residences - h
- Play Area - i
- Trailer Dump Station - j
- Trail - k
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- Parking - m
- Telephones - n
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Belly River Group Campground - WATERTON LAKES

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WESTERN REGION CAMPGROUND REPORT

BELLY RIVER GROUP CAMPGROUND WLNP

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WESTERN REGION CAMPGROUND REPORT

BELLY RIVER GROUP CAMPGROUND WLNP